



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
EMD / CWB

03032PSS.06c
DATE: March 31, 2006
NPDES PERMIT NO.: HI 0020796

PERMIT RATIONALE: APPLICATION FOR NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO
THE WATERS OF THE UNITED STATES

PERMITTEE: AMERON HAWAII KAPAA QUARRY

FACILITY: AMERON HAWAII KAPAA QUARRY

FACILITY ADDRESS

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PERMITTEE MAILING ADDRESS

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PERMIT STATUS

The existing NPDES permit was issued on October 19, 2000 and expired at midnight, March 31, 2005. On January 31, 2005, the Permittee applied for renewal of their existing NPDES permit to continue discharging process waste waters from the settling Pond D and Pond E into Kapaa Stream through Outfall Serial No. 002 at coordinates: Latitude 21°23'35"N; Longitude 157°46'45"W, and Outfall Serial No. 003 at coordinates: Latitude 21°23'37"N and Longitude 157°46'43"W.

The Director of Health proposes to issue a permit to discharge to the waters of the United States until March 31, 2010, and has included in the draft permit those terms and conditions which the Director has determined are necessary to carry out the provisions of the Federal Water Pollution Control Act (P.L. 92-500), Federal Clean Water Act of 1977 (P.L. 95-217) and Hawaii Revised Statutes, Chapter 342D.

FACILITY OPERATION AND LOCATION

The Permittee operates a rock quarry (surface mining), a tertiary coarse aggregate processing plant, a Mansand (manmade sand) processing plant, and a concrete batching operation. The facility is located in the northeast corner of the Island of Oahu, Hawaii, between the towns of Kailua and Kaneohe. The Quarry

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property is comprised of about 416 acres of leased land. It is adjacent to the City and County of Honolulu's

Kapaa and Kalaheo Sanitary Landfills, and the Kawainui Marsh. Part of the H-3 freeway divides the property into two(2) parts: Phase I (Areas A&C) and Phase II (Area B). Kapaa Stream runs through the property along the access road to the quarry off Kapaa Quarry Road. Kapaa Stream connects to the Kawainui Marsh.

Process waste waters and storm water from Area A and "mine dewatering" water (as defined in 40 CFR § 436.31) from Area C of the quarry property is collected in a series of ponds, Pond A, Pond B, Pond C and Pond D. The holding pond system is designed to contain the volume of process waste waters and storm water up to a 10-year, 24-hour rainfall event (rainfall = 10 inches). Process waste waters and storm water collected from various places on the quarry property flow by gravity to Pond A and Pond B. Waters collected in Pond A and Pond B are pumped to Pond C as needed. Pond C is located at a higher location. Water collected in Pond C can be pumped to Pond D if necessary though historically it has never occurred. Instead Pond C water is generally pumped to a 50,000 gallon water tank to be used for facility dust control. Pond D is a very large quarry pit (the Phase I pit) located at a higher elevation than Pond C. The waters in Pond D may be pumped to Outfall Serial No. 003 and discharged into Kapaa Stream. Another water tank is installed near Pond D that is used to contain water from Pond D and used for facility dust control.

Area B (Phase II) is located on the other side of the H-3. The Permittee has begun development and extracts a limited amount of rock from the area. The Permittee plans to use this area exclusively when the rock source in Area C is consumed. It may take 5 to 10 years or more for them to use up the rocks in Area C according to market demand and limited access to the Phase I quarry pit when that pit contains substantial amounts of storm water. As Area B is developed, storm water is collected in Pond E. The water in Pond E will either be pumped to Pond A through D for facility dust control or pumped to proposed Outfall Serial No. 003 for discharging to Kapaa Stream, or pumped to Outfall Serial No. 002 directly and discharged to Kapaa Stream.

RECEIVING WATER CLASSIFICATION

The receiving water, Kapaa Stream, is classified by the Department of Health in Hawaii Administrative Rules (HAR), Section 11-54-5.1(a), as a "Class 2" "Inland Waters". The objective of Class 2 waters is to protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.

DESCRIPTION OF THE PRESENT DISCHARGE

Based on Discharge Monitoring Reports submitted by the Permittee, there was one (1) discharge from Outfall Serial No. 003 to the receiving water during the previous permit period. The effluent monitoring results from Outfall Serial No. 003 is summarized below:

Parameters, Units	Last Quarter, 2003
Flow, MGD	1.6
Total Suspended Solids, mg/L	6.1
Settleable Solids, ml/L	<0.5
Oil & Grease, mg/L	<10
pH, Standard Units	8.04

PROPOSED DETERMINATIONS

A. Proposed Effluent Limitations

The proposed effluent limitations for the Outfall Serial Nos. 002 and 003 are based on the Subpart B for crushed stone stated in 40 CFR Part 436 "Mineral Mining and Processing Point Source Category"; HAR, Chapter 11-54; and best professional judgement.

1. Effluent Limitations

Daily Maximum criterion of Settleable Solids is based on the existing permit limitations which is based on best professional judgement.

Total Suspended Solids and Turbidity limitations are based upon HAR, Section 11-54-5.2(b)(1). Specific water quality criteria listed at Chapter 11-54-05.2(b)(1) are divided into "dry" and "wet" criteria. Considering the history and nature of the discharge, it is predicted that discharges would occur from the facility only during a rainfall event greater than a 10 year, 24-hour rainfall event. Therefore, it is appropriate to apply the "wet" criteria to this facility.

The Water Quality Standards also contain two (2) sets of lower values which are: "not to be exceeded more than 10% of the time," and "geometric mean not to be exceeded." However, given the intermittent nature of the discharges, the most relevant standards are the 2% of the

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time standards listed above, and even these are not likely to be violated. "Not to be exceeded more than 2% of the time" is equivalent to seven (7) days per year. The discharge from the facility would only be expected to cause a violation of the water quality criteria for total total suspended solids, pH, and turbidity. The "Class 2" "Inland Waters" "wet" criteria limitation for total suspended solids is 80.0 mg/l and turbidity is 25.0 N.T.U.

Oil and Grease limitation is based on HAR, Chapter 11-55, Appendix B.

pH limitation range of 6.0 to 8.0 Standard Units is based on the effluent guideline stated in 40 CFR Part 436, which is 6.0 to 9.0, and HAR, Section 11-54-5.2(b)(1) which is 5.5 to 8.0.

2. Effluent Monitoring Requirements

The renewal permit includes the monitoring requirement of oil and grease. This is because oil/water separator effluent is discharged to the ground and mixed with all the other waste waters and storm water and eventually discharged to the containment ponds. Also, pump motors may also leak and discharge oil to the containment pond if motors are not properly maintained.

Turbidity has been added to the monitoring requirements to be consistent with NPDES permits for facilities of similar nature.

The Permittee is required to record:

- a. the cause of the discharge;
- b. date, time and the duration of the discharge;
- c. action taken to reduce, eliminate or prevent reoccurrence of the discharge; and
- d. the rainfall in inches per day for each day which contributed to or caused the discharge.

The minimum monitoring frequency shall be once per discharge. The monitoring results shall be reported once per quarter. In a monitoring period where there has been no discharge, the Permittee shall report "No Discharge".

Nutrient and toxic pollutant analyses are not required due to the nature of the quarry operation.

B. Reporting Requirements:

Same as the existing permit.

C. Other Requirements

1. The Permittee is required to submit an Effluent Monitoring Program within 30 days from the issuance date of this permit.
2. The Permittee is also required to develop a Best Management Practices (BMPs) Plan within 30 days from the issuance date of this permit.